FY98
Project 96-019-00: Second-Tier Database Support for Ecosystem Focus

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Project Requirements:

This project contracts for data management services supporting several Fish and Wildlife Program projects and provides single-point, interactive, public access to a variety of regionally-distributed historical and in-season monitoring and evaluation information critical to resource management and hydrosystem operations. These services do not provide analysis of information except as the user interacts to select time series and other constraints on the information to be presented graphically or in tables.

This Data Access in Real Time (DART) service has historically been provided by the University of Washington's Columbia Basin Research group under Project 89-108-00 (Monitor and Evaluate Modeling Support). Proposals to incorporate these services into other Program data services have been unsuccessful.

Project Objectives:

1. Foster better resource management and project operation decisions through effective access to historical and recent environmental, fishery, and operational information.

2. Provide single-point, Internet-based, and interactive access to a subset of historical and current fishery, hydraulic, project operation, and environmental information vital to year-round planning and in-season decision-making for operation of the Federal Columbia River Power System. These decisions affect survival of migrating juvenile and adult anadromous fishes and resident fishes. Services are intended to compliment, not duplicate, existing historical and in-season database services provided by Project 88-108-04 (StreamNet), Project 94-033-00 (Fish Passage Center), and other regional data services. The complimentary service is principally the ability to interactively select and graphically overlay (or tabulate) a variety of historical and current information to provide insight to guide planning and in-season decisions.

3. Generate historical and in-season data sets critical to Projects 91-051-00 (Monitoring and Evaluation Statistical Support) and 89-108-00 (Monitor and Evaluate Modeling Support). The former project generates on-line, Internet-based forecasts of in-season passage timing for ESA stocks considered by the TMT. The latter project forecasts juvenile salmonid survival through the hydrosystem. These independent estimates are critical to BPA's efforts to minimize operational impacts to regional fishes.

4. Reduces user impacts to Project 90-080-00 (PITAGIS) which prioritizes data polling and quality control over data analysis and presentation. DART provides a query interface to a mirror copy of the PITAGIS database.

FY98 Accomplishments:

1. On March 11, 1998, BPA and the Corps of Engineers reported to the National Performance Review on "Decision Support and the Management of the Columbia River for Hydro-electrical Power Generation and Endangered Species". This presentation reflected on the role such services, including DART, play in meeting federal responsibilities under Executive Order 13011 - "Federal Information Technology" and the Endangered Species Act. Through DART and other Internet-based information services, the federal agencies are restructuring governmental services to provide public access to environmental information and effective information tools to decision makers. This presentation can be accessed at:
http://www.efw.bpa.gov/Environment/EW/DOCS/OTHER/AccessAmerica/Welcome.html

2. The Data Access in Real Time (DART) service provides Internet access to historical and current year information on juvenile and adult fish passage, PIT-tag detections, and river conditions. The service may be accessed at: http://www.cqs.washington.edu/. Usage statistics are reported at: http://www.cqs.washington.edu/wusage/index.html and are summarized below for the period January 1 - July 15, 1998. Query hits are counts of actual graphical or tabular products whereas html counts include both pages of substance - e.g. publications, reports - and pages used for accessing the materials - e.g. forms, welcome, etc. The increase in April reflects access for the inseason management period. These queries and their products are unique and not available elsewhere in the Northwest.

January 1 - July 15, 1998 DART web services at Columbia Basin Research

Month	**Graphics Queries**			**Composite & Detail Report Queries**			**HTML**
	River Env.	Adult	Other	River Env.	Adult	Other	**pages**
JAN	976	217	69	1414	467	257	3660
FEB	836	622	202	1258	490	353	3707
MAR	1326	419	714	1554	1529	455	5139
APR	2109	918	1700	2137	3369	1223	8507
MAY	1626	1383	1528	1943	3625	1370	8617
Jun-July15	2120	2677	2211	2725	4678	1125	10,962
TOTAL	8993	6236	6424	11031	14158	4783	40592
Total Graphics Queries			21,653				
Total Comp. & Detail Queries			29,972				
Total Queries			**51,625**				
Total HTML pages			**40,592**				

3. Revisions to the service included addition of Endangered Species Unit (ESU) categories for steelhead and ESU definition refinement to reflect the geographic distribution of current-year PIT tagging. Information on shad was also added.

4. In May 1998, the DART data manager informally queried the Fish Passage Center manager regarding the possibility of transferring DART to the FPC. No progress was made. (Note that an attempt to transfer DART to StreamNet in 1997 also failed. Also, on June 3, 1997, the Northwest Power Planning Council questioned the possible redundancy of DART and analysis on the Fish Passage Center's (FPC) Web pages. On July 30, 1997, BPA submitted to the Council a University of Washington prepared document comparing the several systems that constitute the region's information infrastructure for anadromous fish. That document is available at: http://www.efw.bpa.gov/Environment/EW/SUBJECTS/FRAMEWORK/DATA/DARTvsFPC/Welcome.html

5. Typical daily workload during the salmon migration period, April - August include the automated download, quality control, reduction to daily averages as appropriate, and database loading of fishery, river condition, and operational observations from regional data services including the Fish Passage Center, Pit Tag Information System, Corps of Engineers, Bonneville Power Administration, U.S. Geological Survey, etc. Daily record loading magnitude: water quality: 50,000 records; project data: 10,000 records; PIT-tag 700-20,000; Adult fish detections: 100s of records

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